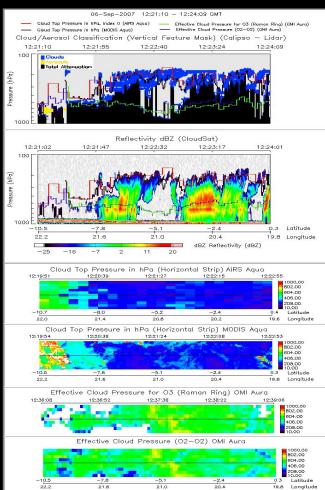
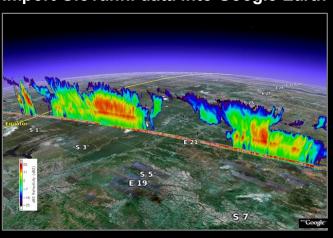
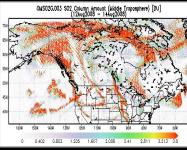
Studying Aerosols, Clouds and Water Vapor Using the A-Train Giovanni Instance



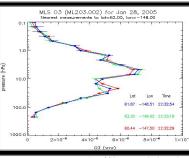
Import Giovanni data into Google Earth



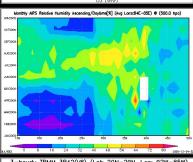
Giovanni: Exploring Air Quality, Hurricanes, Monsoons and more...



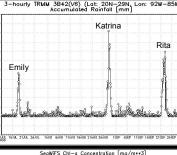
OMI Sulfur Dioxide concentration data showing the transport of the Kasatochi volcano (Alaska) eruption cloud over North America, August 12-14, 2008



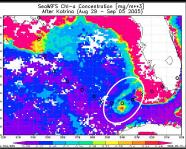
Aura MLS vertical profiles of ozone for January 28, 2005. The secondary ozone peaks below the regular ozone maxima is due to the transport of air of polar origin having a greater ozone content in the lower stratosphere.



Aqua AIRS Hovmöller plot time-latitude cross-section for 500 hPa, showing increased relative humidity over the Tibetan Plateau during the Indian monsoon.



TRMM time-series of 3-hourly accumulated rainfall. The spikes show three of the Category 5 hurricanes, Emily, Katrina and Rita during the 2005 hurricane season in the Gulf of Mexico.



SeaWiFS Chlorophyll-*a* concentration. The plot shows elevated values of Chlorophyll west of Florida after the passage of Hurricane Katrina.

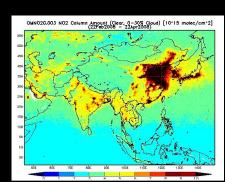
National Aeronautics and Space Administration



The Bridge Between Data and Science

"With Giovanni's data sets and user friendly analysis tools available on the World Wide Web to the whole world, it is possible for an increasing and broader audience to address issues in earth science without having a detailed knowledge of digital image processing and programming techniques."

E-mail from a Giovanni user



Atmospheric NO₂ concentrations over Asia from the Ozone Mapping Instrument, February-April 2008, averaged and plotted with Giovanni

www.nasa.gov

About Giovanni

Giovanni is a Web-based application developed by the NASA Goddard Earth Sciences Data and Information Services Center (GES DISC). Giovanni provides a simple and easy way to visualize, analyze, and access vast amounts of Earth science remote sensing data.

Giovanni development is driven by a team of dedicated scientists with many years of experience in multiple disciplines. This ensures that Giovanni always addresses the real-world needs of the science community.

http://giovanni.gsfc.nasa.gov

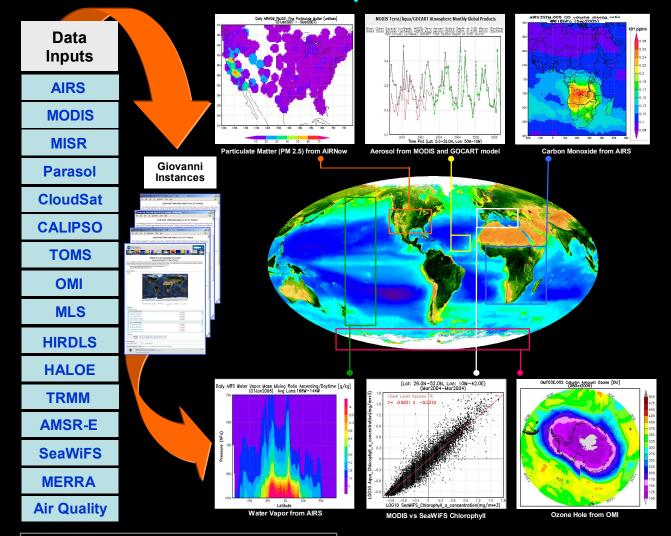
The Power of Simplicity

- Only a Web browser is needed.
- No need to learn data formats and programming.
- No need to download large amounts of data.
- Customized data and analyses can be obtained with only a few mouse clicks.

Giovanni Features

- Plot Types for Single Parameter:
 - Area plots of time-averaged parameters
 - Time series plots of area-averaged parameters
 - Latitude-longitude-time Hovmöller diagrams
 - Longitude-latitude-pressure-time cross sections
 - Vertical profiles
 - Zonal averages
- Plot Types for Multi-Parameter Intercomparisons:
 - Area plots of overlaid time-averaged parameters
 - Time series plots of area-averaged parameters
 - Difference plots
 - Scatter plots with regression
 - Temporal correlation maps
- Animations
- Climatology and anomalies
- Download formats: ASCII, HDF, netCDF, KMZ, JPG
- Web services for downloading subsetted data

Giovanni: Visualization and Analysis of Earth Science Data Online



Available Giovanni Instances

- A-Train data along CloudSat track from the CloudSat, CALIPSO, Aqua MODIS, AIRS, OMI, MLS and Parasol instruments
- Air Quality for visualization and exploration of remotely- sensed and in situ data products related to air quality
- MODIS, MISR, Parasol and GOCART model aerosol parameters
- AIRS maps and profiles of atmospheric dynamics and trace gases
- OMI global ozone, aerosol, cloud and trace gases

- Aura MLS profiles of atmospheric trace gases
- Aura HIRDLS atmospheric vertical profiles
- TOMS total ozone, reflectivity, aerosol index and UV erythemal data
- TRMM rainfall, near-real-time 3-hourly, Multi Satellite Precipitation Analysis, and ground observations
- SeaWiFS and MODIS chlorophyll and many ocean color parameters
- Agriculture-oriented TRMM and other instruments precipitation and vegetation parameters
- UARS HALOE vertical profiles of trace gases
- ... and more data products and instances are on the way